

Cementing Treatment



Start Date	9/10/2018	Execution ID	EXC-10782-T4D2S802
End Date	9/11/2018	Project ID	PRJ1010618
Client	BAYSWATER EXPLORATION & PRODUCTION, LLC	Well	KTC FARMS C-35-36HN
Client Field Rep.	Gary	API#	05-123-47089
Service Sup.	Roger Acuna	County	WELD
District	Cheyenne, WY	State/Province	CO
Type of Job	Long String	Rig	True 38

WELL GEOMETRY

Type	ID (in)	OD (in)	Wt. (lb/ft)	MD (ft)	TVD (ft)	Excess(%)	Grade	Thread
Previous Casing	8.92	9.63	36.00	1,540.00	1,540.00		K-55	LTC
Open Hole	8.50	0.00	0.00	17,399.00	7,234.00	7.00		
Casing	4.78	5.50	20.00	17,392.00	7,234.00		P-110	BTC

Shoe Length (ft): 29.00

HARDWARE

Bottom Plug Used?	No	Tool Type	Float Collar
Top Plug Used?	Yes	Tool Depth (ft)	17,363.00
Top Plug Provided By	Non BJ	Max Casing Pressure - Rated (psi)	11,080.00
Top Plug Size	5.500	Max Casing Pressure - Operated (psi)	3,600.00
Centralizers Used	Yes	Pipe Movement	None
Centralizers Quantity	205.00	Job Pumped Through	Manifold
Centralizers Type	Rigid	Top Connection Thread	BTC
Landing Collar Depth (ft)	17,363	Top Connection Size	5.5"

CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	Solids Present at End of Circulation	No
Circulation Prior to Job	Yes	10 sec SGS	9.00
Circulation Time (min)	180.00	10 min SGS	16.00
Circulation Rate (bpm)	12.00	30 min SGS	18.00
Circulation Volume (bbls)	2,160.00	Flare Prior to/during the Cement Job	No
Lost Circulation Prior to Cement Job	No	Gas Present	Yes
Mud Density In (ppg)	10.10	Gas Units	500
Mud Density Out (ppg)	10.10		
PV Mud	15	YP Mud	9

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TEMPERATURE

Ambient Temperature (°F)	65.00	Slurry Cement Temperature (°F)	60.00
Mix Water Temperature (°F)	60.00	Flow Line Temperature (°F)	165.00

BJ FLUID DETAILS

Fluid Type	Fluid Name	Density (ppg)	Yield (Cu Ft/sk)	H2O Req. (gals/sk)	Planned Top of Fluid (Ft)	Length (Ft)	Vol (sk)	Vol (Cu Ft)	Vol (bbls)
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	11.5000			0.00				80.0000
Lead Slurry	BJCem P100.3.01C	13.2000	1.8298	9.87	0.00	5921	920	1,680.0000	299.1000
Tail Slurry	BJCem P50.6.02C	13.5000	1.4777	7.45	5,921.00	11471	1780	2,626.0000	467.7000
Displacement 2	Retarded Water w/ Clay Protection & Biocide	8.3331				0	0	0.0000	20.0000
Displacement Final	Water w/ Clay Protection & Biocide	8.3331			0.00			0.0000	355.0000

Fluid Type	Fluid Name	Component	Concentration	UOM
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	SAND, S-8, Silica Flour, 200 Mesh	215.0000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	SPACER SURFACTANT, SS-267	0.7000	GPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	GELLANT WATER, GW-86	0.9000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	SPACER SURFACTANT, SS-247	0.7000	GPB
Lead Slurry	BJCem P100.3.01C	CEMENT, ASTM TYPE III	100.0000	PCT
Lead Slurry	BJCem P100.3.01C	FOAM PREVENTER, FP-25	0.3000	BWOB
Lead Slurry	BJCem P100.3.01C	GELLANT WATER, GW-86	0.0500	BWOB
Lead Slurry	BJCem P100.3.01C	RETARDER, SR-20	0.8000	BWOB
Lead Slurry	BJCem P100.3.01C	FLUID LOSS, FL-66	0.5000	BWOB
Lead Slurry	BJCem P100.3.01C	BONDING AGENT, EC-2	3.0000	BWOB
Tail Slurry	BJCem P50.6.02C	CEMENT, CLASS G	50.0000	PCT
Tail Slurry	BJCem P50.6.02C	FLUID LOSS, FL-66	0.2000	BWOB
Tail Slurry	BJCem P50.6.02C	GELLANT WATER, GW-86	0.1000	BWOB
Tail Slurry	BJCem P50.6.02C	Flyash (Rockies)	50.0000	PCT
Tail Slurry	BJCem P50.6.02C	RETARDER, SR-20	0.1500	BWOB

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Tail Slurry	BJCem P50.6.02C	FOAM PREVENTER, FP-25	0.3000	BWOB
Tail Slurry	BJCem P50.6.02C	EXTENDER, BENTONITE	2.0000	BWOB
Displacement 2	Retarded Water w/ Clay Protection & Biocide	RETARDER, R-8L	0.5000	GPB
Displacement 2	Retarded Water w/ Clay Protection & Biocide	CLAY STABILIZER ResCare CS	0.0800	GPB
Displacement 2	Retarded Water w/ Clay Protection & Biocide	BIOCIDE, BIOC11139W	0.0100	GPB
Displacement Final	Water w/ Clay Protection & Biocide	BIOCIDE, BIOC11139W	0.0100	GPB
Displacement Final	Water w/ Clay Protection & Biocide	CLAY STABILIZER ResCare CS	0.0800	GPB

TREATMENT SUMMARY

Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)
IntegraGuard EZ Spacer	3.00	80.00	200.00
BJCem P100.3.01C	7.00	299.10	800.00
BJCem P50.6.02C	8.00	467.70	500.00
Retarded Water w/ Clay Protection & Biocide	8.00	20.00	800.00
Water w/ Clay Protection & Biocide	8.00	355.00	3,500.00

	Min	Max	Avg
Pressure (psi)	200.00	3,500.00	1,160.00
Rate (bpm)	3.00	8.00	6.80

DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amount of Cement Returned/Reversed	15.00
Calculated Displacement Volume (bbls)	384.00	Method Used to Verify Returns	Visual
Actual Displacement Volume (bbls)	375.00	Amount of Spacer to Surface	80.00
Did Float Hold?	Yes	Pressure Left on Casing (psi)	0.00
Bump Plug	Yes	Amount Bled Back After Job	5.00
Bump Plug Pressure (psi)	3,500.00	Total Volume Pumped (bbls)	1,222.00
Were Returns Planned at Surface	Yes	Top Out Cement Spotted	No
Cement returns During Job	Full	Lost Circulation During Cement Job	No

EVENT LOG



Customer Name: BAYSWATER EXPLORATION & PRODUCTION, LLC

Well Name: KTC FARMS C-35-36HN

Job Type: Long String

Quote ID: QUO-18900-Q3B3R9

Plan ID: ORD-10782-T4D2S8

Execution ID: EXC-10782-T4D2S802

District: Cheyenne, WY

BJ Supervisor:

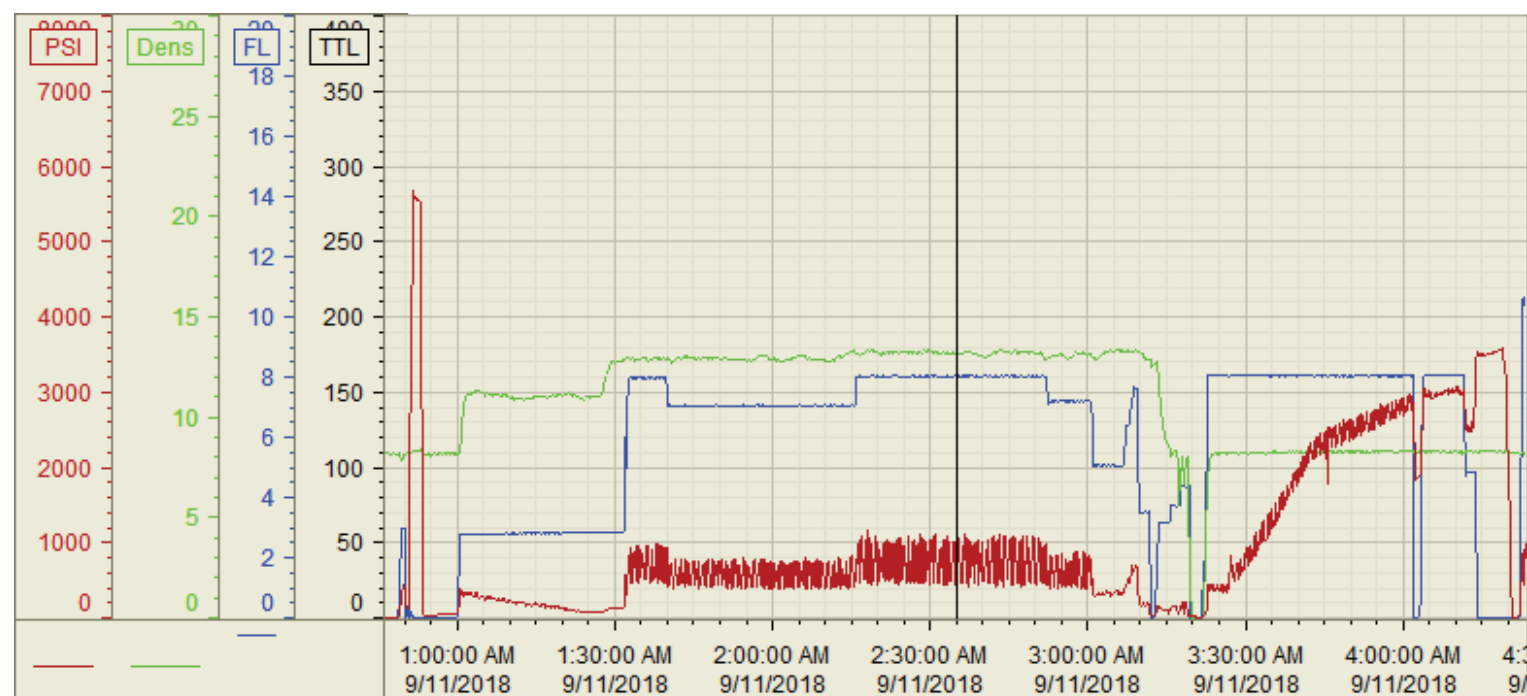
Seq.	Start Dt./Time	Event	Density (ppg)	Pump Rate (bpm)	Pump Vol(bbls)	Pipe Pressure(psi)	Comments
1	09/10/2018 12:00	Callout					CALLED OUT RTS 23:30
2	09/10/2018 18:45	Safety Meeting					JOURNEY MANAGEMENT
3	09/10/2018 19:00	Leave Location					DEPART CHEYENNE WY CAMP
4	09/10/2018 21:30	Arrive on Location					ARRIVE TO LOCATION
5	09/10/2018 21:30	Safety Meeting					STEACS RIG UP
6	09/10/2018 21:45	Rig Up					RIG UP IRON AND HOSES
7	09/10/2018 21:45	Customer	10.1000	12.00	2,160.00	1,275.00	WAITING ON RIG TO CIRCULATE WELL
8	09/11/2018 00:30	Safety Meeting					PRE JOB SAFETY MEETING
9	09/11/2018 00:45	Start Pumping	8.3300	3.00	3.00	500.00	FILL LINES 3BBLS FRESH WATER
10	09/11/2018 00:46	Pressure Test				6,000.00	TEST LINES
11	09/11/2018 00:51	Pump Spacer	11.5000	3.00	80.00	500.00	PUMP 80BBLS INTEGRAGUARD EZ SPACER @ 11.5PPG WITH SURFACTANTS
12	09/11/2018 01:28	Pump Lead Cement	13.2000	7.00	299.00	800.00	PUMP 299BBLS BJCEM P100.3.01C @ 13.2PPG (920SKS 1.83YLD 9.87GPS) CALCULATED TO SURFACE
13	09/11/2018 02:11	Pump Tail Cement	13.5000	7.00	468.00	500.00	PUMP 468BBLS BJCEMP50.6.02C @ 13.5PPG (17801.48YLD 7.45GPS) CALCULATED TOP 5921'
14	09/11/2018 03:15	End Pumping					SHUTDOWN WASH PUMPS AND LINES TO THE PIT
15	09/11/2018 03:21	Drop Top Plug					DROP LATCHDOWN PLUG

EVENT LOG



16	09/11/2018 03:21	Pump Displacement	8.3300	8.00	355.00	2,700.00	PUMP FRESH WATER WITH RES- CARE AND BIOCIDES
17	09/11/2018 04:02	Spacer Back to Surface					SPACER TO SURFACE @ 300BBLS INTO DISPLACEMENT
18	09/11/2018 04:11	Cement Back to Surface					CEMENT TO SURFACE @ 360BBLS INTO DISPLACEMENT
19	09/11/2018 04:12	Pump Displacement	8.3300	5.00	20.00	2,500.00	SLOW RATE TO LAND PLUG
20	09/11/2018 04:14	Land Plug				3,500.00	LAND PLUG 1000PSI OVER FINAL CIRCULATING PRESSURE
21	09/11/2018 04:17	Check Floats					CHECK FLOATS
22	09/11/2018 04:18	End Pumping					END JOB
23	09/11/2018 04:18	Safety Meeting					STEACS RIG DOWN
24	09/11/2018 04:30	Rig Down					RIG DOWN IRON AND HOSES
25	09/11/2018 05:00	Safety Meeting					JOURNEY MANAGEMENT'
26	09/11/2018 05:15	Leave Location					DEPART LOCATION

Customer: BAYSWATER
 Well Number: C-35-36HN
 Lease Info: KTC FARMS



	Name	Y value	X value/time stamp	Tag name Y
1	PS - Press (PSI)	459.5	9/11/2018 2:34:57 AM	Cementer\PS_DISCHARGE_PRESS_DIAL
2	DH Density (PPG)	13.21	9/11/2018 2:35:01 AM	Cementer\DENSITY2_ACTUAL_RATE
3	Combined pump rate	8.00	9/11/2018 2:34:59 AM	Cementer\Flow_Combined
4				
5				

Source: Control1 5:04:34 AM